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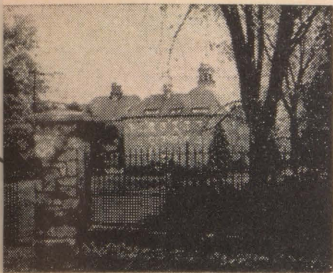
Drainage needs
in Quebec

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THE MACDONALD LASSIE

JULY 1969



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MACDONALD JOURNAL

4 EDITORIAL

5 DRAINAGE NEEDS IN QUEBEC

9 QUEBEC YOUNG FARMERS

11 MACDONALD REPORTS

15 THE FAMILY FARM by Tom Pickup

20 WOMEN'S INSTITUTES

COVER: Beef cattle on the farm of Mr. J. M. Tremblay at Grande Baie, Chicoutimi.

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agricultural research in Canada



ONE OF THE biggest agricultural endeavors in Canada — and the one that is least questioned — is agricultural research. Millions of dollars are spent annually — most of it by the Federal Government. Of this only a small amount is spent on economics and marketing research — only 8% of the total number of researchers in the Canadian research effort that serves agriculture.

The fact that we so seldom question this input into agricultural research is to a large extent the result of our conditioning to think that any research must be good research — If you differ then you are labelled as (a) not being an expert or (b) a negative thinker or (c) just plain stubborn. Yet agricultural research in Canada is affecting the lives of each and every one of us — whether we live in a high-rise city apartment or on a rural side road.

The Federal Government is the great public benefactor of most of this research — the prime recipient of the money is the Canada Department of Agriculture. As a result, the C.D.A. has become a virtual haven of pure research — a haven for the scientists who want to do research for research sake. For this investment, we manage to keep three technical journals in a very healthy state, with enough research papers to fill volumes each year. We manage to keep a chain of experimental farms and research stations operating from coast to coast and from inside the Arctic Circle to the most southern point in Canada. In fact, the Canada Department of Agriculture has become regarded, on a world-wide basis, as a Utopia for agricultural scientists. They can do the type of pure research that they are interested in, with no one to bother them, with lots of cash, and no one to report to other than the Minister of Agriculture.

This focus results in a complete reversal of the expected scientific roles

of the C.D.A. and the Faculties of Agriculture. With the C.D.A.'s emphasis on pure research, the Universities are forced, because of provincial support to do more producer orientated research than the C.D.A. This, to me, is the opposite of what should be.

The Federal and Provincial governments should accept the responsibility of mission-oriented research with the Universities focusing on research in a particular discipline. The Canada Department of Agriculture should abandon discipline oriented research and focus instead on the practical inter-disciplinary problems of Canadian agriculture.

As a solution to this, I suggest that the most of the agricultural scientists currently employed by the Federal Government should be located on Faculty or Schools of Agriculture campuses and integrated with them as much as possible. There, they would have access to libraries, computer services, and most important of all, a chance to discuss and debate with their colleagues in their own discipline. To have a dozen soil scientists working in as many locations across Canada, on individual research projects done in isolation from other soil scientists is ridiculous.

If the Federal scientists could be located in an academic environment, as many are in the United States they would certainly benefit from the agricultural stimulation. The Faculties on the other hand, would benefit since this influx of scientists could do some teaching, guide graduate students, and participate in seminars. By this means, what has become an extensive approach to agriculture would become more intensive.

In addition, by locating Federal

government scientists on University campuses, there would be the opportunity for contact with other disciplines and fields of study with engineering, management, sociology, geography, meteorology, physics — only to name a few. This availability of inter-disciplinary contact would in turn lead to more mission oriented research — something that is drastically needed in agriculture.

The second need in agricultural research in Canada is to have more farmer involvement in deciding research needs and priorities. I suggest a levy of one tenth of one percent of off-farm sales be contributed to a National Research Commission. This commission could have a representative group of farmers administer the collected funds and allocate them to areas of needed research. This system works — as an example — in Australia, sheep farmers supported financially the research which resulted in Koratron, the permanent press treatment of wool that is now commonly used around the world. The Dairy farmers of Canada already use this levy system, I suggest a similar system to support a producer — directed research program in agriculture.

A recent recommendation of the Federal Task Force on Agriculture was concerned with the establishment of a Commission on Agricultural Research — while I support this recommendation — it is only a small part of the total change that is needed in Canada's agricultural research policy.

If the Federal policy could encourage Federal scientists to locate on Faculty of Agriculture campuses all across Canada, if there was a producer directed and supported research agency, and if there could be a review of present Federal policy for agricultural research, then Canada would be well on the way to a more efficient and rational system of research. In my opinion, we would all benefit — But if nothing is done, then Canada will lose the world-wide agricultural research effort by default.

The Editor

drainage needs in quebec

by *Pierre-J Jutras*,
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ALTHOUGH THE Province of Quebec covers approximately 335.3 million acres, there are only 5.2 million acres under cultivation or 1.5 percent. The total territory extends from the 45th to the 62nd parallel; the land under cultivation, however, is limited to the 49th.

These statistics, when compared to the rest of Canada, indicate that Quebec is the largest of the 10 Canadian provinces, but that its area under cultivation ranks fifth. The land cultivated is located along the shores of the St. Lawrence River and its tributaries. Quebec agriculture revolves mainly around the dairy industry with 90 percent of the cropland being used for the production of hay and cereals.

South of the Laurentian Plateau which covers the upper nine tenths of the province, the St. Lawrence lowlands spread on either side of the River and form a triangular plain extending from Hull to Quebec City and down to Lake Champlain. This is the main agricultural region of the province. It was invaded by the Champlain sea toward the end of the Pleistocene era, to which phenomenon it owes its large deposits of clay and sand. The clay soils, when properly managed, are among the most productive soils in the province. Most of the management problems are concerned with soil water. These soils are located in an area with a frost-free period of 130 days or more, whereas the other soils of the province are located in colder climates (figure 1).

An analysis of the soil survey reports of five counties shows that the percentage of fertile soils in each county increases from east to west, being highest in the St. Lawrence Lowlands (table 1).

A summation of the areas suffering from imperfect or poor drainage in each of the five counties studied revealed that the percentage of problem soils is fairly constant, varying between

TABLE I — PERCENTAGE OF LAND AREA UNDER CULTIVATION WITH A RELATIVE HIGH LEVEL OF FERTILITY (from Ouellette)

County	Percent area with high fertility
Levis	11
Drummond	17
Bagot	32
Berthier	38
Chateauguay	44

TABLE II — PRIORITY WITH WHICH UNDERDRAINAGE SHOULD BE UNDERTAKEN IN THE COUNTIES

First priority	Second priority	Third priority
Argenteuil	Bellechasse	Abitibi
Arthabaska*	Brome	Beauce
Bagot	Champlain	Bonaventure
Beauharnois	Chicoutimi	Charlevoix
Berthier	Dorchester	Frontenac
Chambly	Lac St-Jean Ouest	Gaspé Est
Châteauguay	Lotbinière	Gaspé Ouest
Compton	Maskinongé	Gatineau
Deux-Montagnes	Mégantic	Hull
Drummond	Papineau	Iles-de-la-Madeleine
Huntingdon	Pontiac	Kamouraska
Iberville	Portneuf	Labelle
Joliette	Richmond	L'Islet
Lac St-Jean Est	Rivière-du-Loup	Matane
Laprairie	St-Maurice	Matapédia
L'Assomption	Wolfe	Montmagny
Lévis		Rimouski
Missisquoi		Saguenay
Montcalm		Témiscamingue
Montmorency*		Témiscouata
Napierville		
Nicolet		
Québec*		
Richelieu		
Rouville		
St-Hyacinthe		
St-Jean - Iberville		
Shefford		
Sherbrooke		
Soulanges		
Stanstead		
Terrebonne		
Vaudreuil		
Verchères		
Yamaska		

* Soil Surveys not Available

65 and 70 percent of the total farm land.

The value of agricultural products sold per acre in the Montreal region is approximately three times that which is sold in either Abitibi or the lower St. Lawrence regions. Even at that, this amount is extremely low and an intensification of production will be necessary through under-drainage, fertilization and the growing of intensive crops. The increase in yield and income from these flat lands will release regions of sloping land for grass-land farming or reforestation.

HISTORY OF DRAINAGE IN QUEBEC

Even since 1912 the Quebec Department of Agriculture has defrayed approximately half the cost of under-drainage in the province. The Provincial Government owns and operates most of the drainage machines in the province. Farmers are charged a minimal fee on a per foot basis. Although this Government involvement will tend to disappear gradually, it has helped maintain a high standard of quality of tile installations, a condition which is often lacking in states and provinces where private contractors operate without official supervision.

An Act, similar to the Tile Drainage Act of Ontario, was passed in 1920. The individual municipality could pass a by-law to establish a credit with the Provincial Government and loan money to a farmer at a low rate of interest for a period not exceeding 20 years. This Act was never used to advantage and farmers have usually borrowed according to terms set out in the Farm Improvement Act.

Although a total of only 42,000 acres of land had been under drained by the end of 1965, the increase has been appreciable in recent years, as indicated by the exponential growth pattern expressed by figure 2. This growth can be traced to a greater emphasis placed on drainage by extension personnel, to a greater number of drainage machines in operation, and to a gradual increase in yearly output per machine since 1960 (figure 3).

In adjoining areas such as Ontario, although there has been greater emphasis in underdrainage activities during the years of good farm prices and following wet years, there has been a steady interest in underdrainage. During the period as far back as 1906 to 1919, 18,609 miles of drain were installed for the improvement of

153,531 acres. It was estimated, in 1961, that there were approximately 1.25 million acres of land already underdrained in Ontario, based on tile production figures. Farmers surveys placed this estimate at 2.2 million acres.

In order to determine whether the total rate of increase in drainage installation is sufficient to achieve a sizable portion of the underdrainage needs of the Province of Quebec, in the next decade or so, and to help plan research and extension work, a survey was effected.

PROCEDURE AND RESULTS

The work was divided into three steps: I — establishing which counties could economically support the drainage projects.

II — determining the number of acres in need of underdrainage in each county.

III — questioning farmers to obtain their reactions concerning underdrainage.

I. — It has been recognized that in some locations, even good soils imperfectly or poorly drained do not warrant the added cost of artificial drainage.

Not all wet land should be drained. Since drainage is expensive, the benefits must be carefully weighed against the cost.

The counties of the Province were therefore grouped into three categories, according to the priority with which the drainage work should be executed. The criteria for rating the counties involved the percentage of commercial farms, the percentage of these farms on which fruits, vegetables

TABLE III — COMPARISON OF ACREAGE THAT WOULD BENEFIT FROM UNDERDRAINAGE, WITH AVAILABLE FARM LAND

County	Total Area of all Farm Land* (Acres)	Improved Land* (Acres)	Total Land under Cultivation* (Acres)	Good and Fair Improved Land that would Benefit from Drainage ** (Acres)
Argenteuil	127,646	66,392	39,824	21,600
Bagot	215,629	169,227	122,351	86,400
Beauharnois	60,984	55,566	39,092	50,600
Berthier	160,135	99,604	63,467	48,700
Chambly	43,718	39,751	31,611	33,200
Châteauguay	136,338	103,747	76,764	45,800
Compton	332,419	131,782	88,304	33,400
Deux-Montagnes	129,718	98,103	71,503	59,800
Drummond	288,074	178,313	119,226	67,000
Huntingdon	188,983	106,732	74,082	32,900
Iberville	102,163	91,084	65,871	62,500
Joliette	176,322	119,061	74,398	49,600
Lac St-Jean Est	155,350	103,222	63,623	38,800
Laprairie	72,728	67,552	56,338	48,800
L'Assomption	122,107	92,808	67,034	71,500
Lévis	108,995	66,608	43,640	25,100
Missisquoi	198,054	121,121	87,583	58,600
Montcalm	94,083	60,603	40,517	39,200
Napierville	88,893	75,176	61,240	43,800
Nicolet	351,646	244,732	160,738	72,200
Richelieu	91,252	74,203	48,650	42,800
Rouville	128,537	107,997	76,556	53,600
St-Hyacinthe	151,566	124,243	89,010	72,400
St-Jean	90,995	77,899	62,273	76,600
Shefford	328,871	173,505	114,008	72,400
Sherbrooke	71,317	36,955	21,571	1,100
Soulanges	73,082	65,095	50,519	65,500
St-Augustine	200,637	87,844	62,500	30,300
Terrebonne	114,395	63,883	39,946	29,700
Vaudreuil	83,336	65,589	47,187	41,700
Verchères	110,051	93,795	70,543	77,300
Yamaska	191,980	152,969	107,704	99,400
Total 32 counties of first priority	4,790,004	3,215,161	2,237,673	1,662,400
Total for the province	14,198,492	7,864,176	5,213,302	3,180,000 (estimate)

* Source: 1961 Census of Canada

** Areas measured with Bruning Areagraph Chart No.4850 - Degree of precision at least 90 percent.

and field crops are the main crop and the percentage of farms on which the value of products sold is above \$5,000. per year. These values were obtained from the 1961 Census of Canada and the classification appears in table II.

Establishing priority by no means suggests eliminating activity in all but the 32 counties of the first group. The requests of farmers in groups 2 and 3 counties should be evaluated on their respective merits and extension personnel in these areas should make their recommendations accordingly. However, because of their economic advantage, counties in group I should receive concentrated extension efforts, equipment and technical services.

2. — The counties of the first group, except for three, have all been mapped and classified according to their suitability for agricultural use. Their drainage characteristics are also indicated. Soils rated lower than fair do not usually warrant underdrainage. By transposing on areal maps all soils with a fair to good rating with either poor or imperfect drainage, it was possible to compute the total area of improved land that would benefit from drainage. The results are presented in table III.

3. — To determine if farmers have the necessary human and physical resources to solve their drainage prob-

lems, 379 farms were visited at random in 24 of the 32 counties of the first group. All farms were located on acreage computed under section "2" above.

The answers to this questionnaire appear in table IV.

DISCUSSION

Analyses of soil surveys, geologic formations, weather conditions, general farm economic patterns and population concentration show a definite advantage in emphasizing drainage activities in the St. Lawrence lowlands. There are approximately 1.66 million acres of good and fair improved land that would benefit from underdrainage in that sector and in the remaining counties of the first category. An estimate of the total area of land that would benefit from drainage on a provincial-wide basis can be obtained from the data shown in Table III. Based on the "total land under cultivation figures", a conversion

5.21 million

factor of —————

2.24 million

or 2.33 can be applied to the "32 county" total of 1.66 million acres, yielding (1.66 x 2.33) or 3.85 million acres.

A more conservative estimate of the total area of land that would benefit from drainage can be obtained by referring to the proportion of land tile drained in the 32 counties given first priority, to the total provincial area tile drained. At the completion of the 1965 season, records showed that out of a total of 42,000 acres tile drained, 22,000 were located in the 32 counties in question, giving a conversion factor

of $\frac{42,000}{22,000}$ or 1.91

Applying this factor of 1.91 to the "32 county" total of 1.66 million acres yields 3.18 million acres.

Relying on this last estimate,

only $\frac{42,000 \times 100}{3,180,000}$ 1.33

percent of the underdrainage needs of the province have been met. This agrees closely with the value of 1.6 percent from the farmer's survey and reported in table IV, question 3.

A more accurate estimate will be possible when the other counties of the province are surveyed.

Accomplishments for the period 1962 to 1964 have coincided with the

TABLE IV — ANSWERS TO FARMERS SURVEY
RELATIVE TO DRAINAGE

ITEM	PERCENTAGE
1. Size of farm (acres)	
<100	33
100 to 200	48
>200	19
2. Soil improvements contemplated in the future	
a) Underdrainage	26
b) Other	10
3. Area already underdrained	1.6
4. Unaware of drainage problem as it affects crop yields	45
5. Considers underdrainage too expensive	53
6. Aware of technical and financial assistance available from Dept. of Agriculture	27
7. Extension personnel had previously discussed drainage with farmer	21
8. Outlet ditches non-existent or too shallow for underdrainage	46
9. Age group	
<25	1
25 to 40	27
40 to 60	56
>60	16
10. Supplements earnings by outside work	19
11. Educational level	
a) Primary	74
b) Secondary	26
12. Subscribes to farm journals	89
13. Follows farm programs on radio and tv	56

proposed rate of drain installation (figure 2). A slight deviation from the curve occurred in 1965 due to a decrease in output per machine (figure 3) and to the insufficient number of new drainage machines added to the fleet that year.

In order for the 1980 goal to be met, drainage contractors will be needed in ever increasing numbers to take over the work currently being done by the Government.

The farm survey shows a definite need to intensify extension activities. Too few farmers are aware of the need for underdrainage and the benefits to be derived through investments in soil water control measures.

Increased activity will be needed from the standpoint of outlet ditches, and this must be considered as an adjunct to underdrainage rather than a separate entity, as it has been in the past. For example, in 1965-66 approximately 4.5 million dollars were spent for surface drainage in Quebec whereas only 0.7 million were invested in underdrainage. These figures include both the farmer's share and the government's share.

A reorientation and intensification will also be needed in cultural patterns to increase farmer income in the St. Lawrence lowlands where climate and soil potential favor investments in underdrainage.

SUMMARY

Conservative estimates show that 1.5 million acres could be underdrained advantageously in the better agricultural counties of Quebec. Extrapolation would bring this area to slightly more than 3 million acres on a provincial-wide basis.

By following the annual rate of increase in drainage installations proposed in figure 2, it will be possible to achieve the 50 percent completion mark by 1980.

This will require the participation of private contractors, increased activity by extension agricultural engineers and credit organizations and the vigilant support of both provincial and federal agencies.

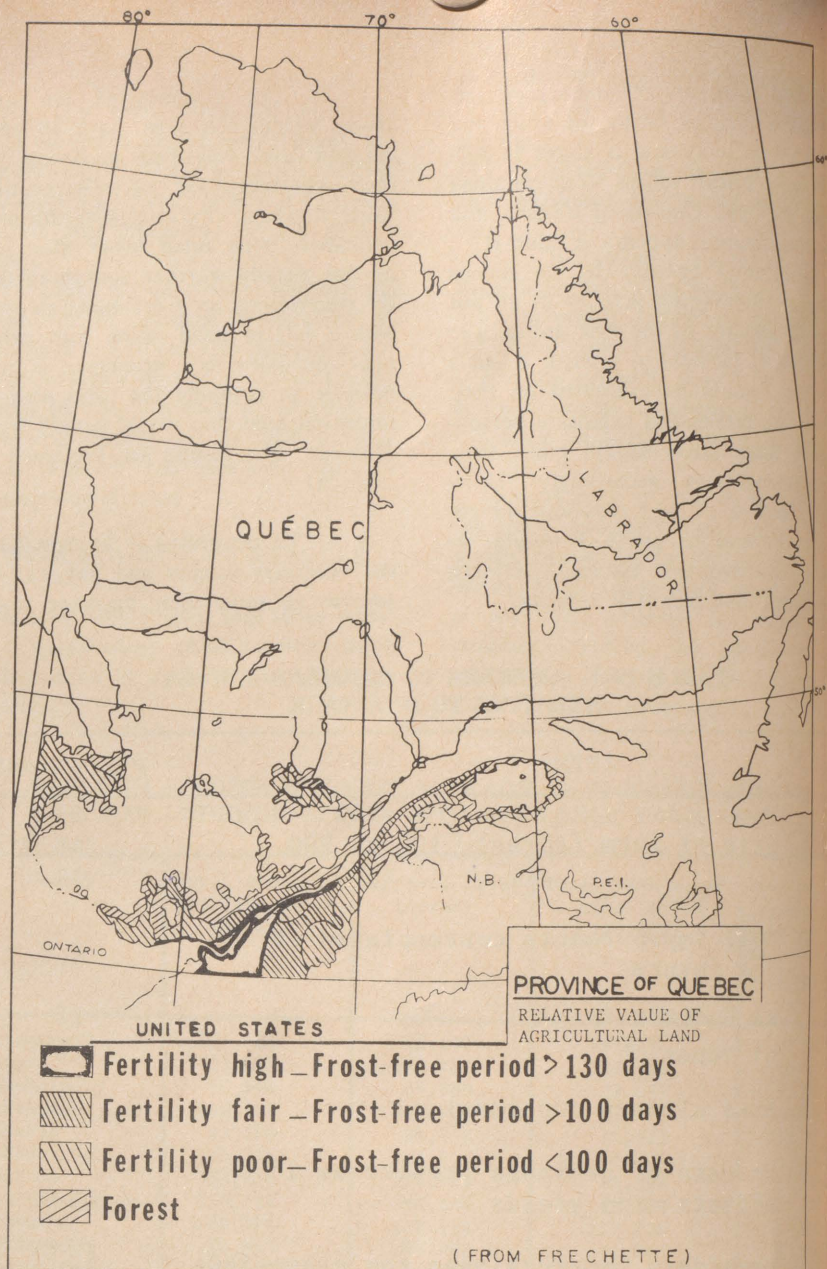


Figure 1. Relative value of agricultural soils of the Province of Quebec.

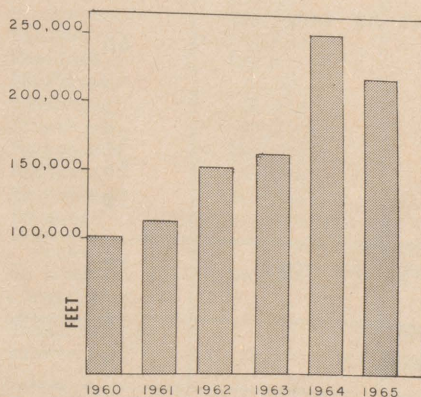


Figure 2. Proposed rate of tile installations to complete 50 percent drainage needs by 1980.

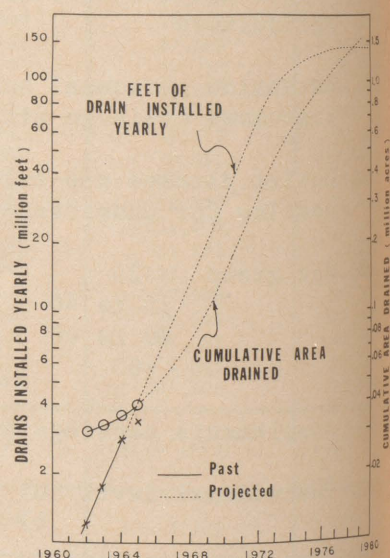


Figure 3. Average number of feet of tile drains installed annually per machine in Quebec.



The camp crew in 1968. They enjoyed high rides in Banff.



Quebec young farmers

*by Galen Driver
Macdonald College*

YOUNG PEOPLE can be responsible. They can be trusted, can take initiative and can accomplish many things on their own — if they have the opportunity.

Most organizations are formed because of a definite need or a crisis. The result of people with common interest being pushed or forced into a situation by a common need. The Quebec Young Farmers association is a new group, so new in fact that they still do not have an approved set of by-laws. They have been doing very well without rules — maybe better than if they had some. With no rules to follow and no tradition to hold them back a steady record of successful events has been accomplished by this group during the past two years.

Who are they?

The Association's members are

young people with rural backgrounds. The ages of members range from 16 years to 30 years up until now the most active members have been between 17 and 23 years of age, old enough to know that they want, and young enough to have new ideas and not to be hampered by too many experiences in unproductive group work. The members come from all areas of the province from Shawville to Sawyerville from Lachute to Huntingdon. Anyone is welcome as long as they are interested in youth work progress and are willing to help themselves.

Their aims —

This group of young hope to encourage unity of Quebec's rural youth. They will facilitate the exchange of ideas within and outside their own group. They will provide challenging

projects which will be available to all clubs who want to use them. They are continually striving to increase the leadership skills and potential of all their members. They are concerned about the lack of adult leadership in many of their home communities. In some cases older members of this group are already becoming junior leaders in their own clubs. As this group works towards their goals they are continually working with established organizations and asking for help and guidance. When this is lacking they sit down as a group and decide how they can get the job done, themselves. In this process they are developing leaders within their own group; they find out how to plan and organize a program; they make decisions and see them through.

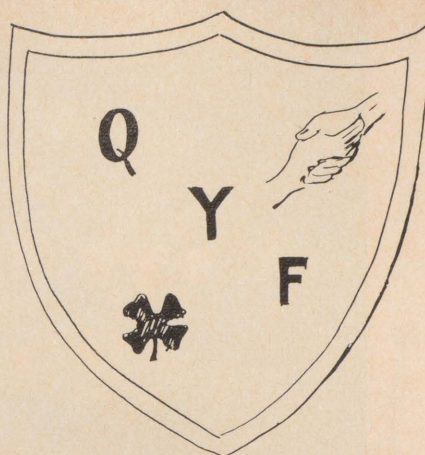
Their accomplishments:

Since July 1967 — 113 young people have been involved in at least one major program organized by this group. Three people have attended all 6 programs, two persons 5 programs and 28 have attended two or three programs. Their programs continue to challenge young people, to encourage them to lead. Their participation is real. They appoint their own committees, make their own plans and invite the leaders to attend. It may interest many to realize that they also pay most of the expenses out of their own pocket. Some get assistance from their clubs or the Federation — but many are willing to pay their own way. As these young people plan and organize each event it is apparent that their experiences in planning are paying off — each event is better prepared than the one before and each time they require less outside help.

Specific projects;

In July 1967-11 young people from Quebec spent 3 weeks in Alberta as part of a Centennial Youth Exchange program. They toured, they talked, and they found that youth programs in Alberta were different from those in Quebec. They had an excellent and informative trip. During the same month 24 young people from Alberta, 12 from Ontario and 12 from Quebec spent 10 days at Macdonald College. They talked about leadership problems in seminars, they worked, visited Expo and had an opportunity to discuss mutual problems which concern rural youth.

The young people from Quebec had enjoyed their summer get together ei-



The proposed crest.

ther in Alberta or at Macdonald College. They wanted to have a reunion of all the Quebecers who had been involved in the exchange. When the reunion was being planned by a group in the Murphy home in Huntingdon they decided that a reunion was fine but they needed a purpose for this gathering. That evening they decided that the theme for the weekend workshop would be "Youth Programs in Quebec." Fourteen young people attended this workshop at "Mont St. Hilaire" along with leaders. Those present were convinced that they wanted to consider changes and to explore the possibility of improving existing programs that were available. They thought that they needed to spread the word to other clubs and to get their opinions as well.

Invitations were sent to each of the 24 clubs which have primarily English speaking members asking them to send delegates to another week-end seminar. On the evening of March 8, 43 delegates and leaders arrived from

14 clubs in Port Lewis (Near Huntingdon) for the second workshop. This time (for the first time) a new unofficial crest appeared on the front of the program. The other words on the front of the program were; "What do we need, what do we have, and how do we get what we need?" These words set the stage for the next two days of intensive discussion. These questions were answered to the best of the ability of those present. There was considerable discussion as to how Federations are formed under the provincial program. There was a general agreement that the federation of clubs should be encouraged. However, this seemed like too little activity for this enthusiastic group of young adults. The following motion was carried "That, while the various regions are developing their federations an interim committee be elected to act as the official voice of Quebec Young Farmers, with a chairman to act as a central voice, to deal with information, projects, exchanges and better understanding between clubs". Since that time this committee chaired by Miss Colleen Coates of East Angus has been the heart and soul of the Quebec Young Farmers. This committee has been meeting regularly and coordinating and activating all projects. One of these projects was a week long camp held at "Spooner Pond" in August 1968. The idea had its beginning at the Port Lewis workshop, the idea grew into reality for 26 people. It was a good vacation for the many who had just finished haying. It was for many their first opportunity to be away from home for a week.

Later in the Fall the "Eastern Township Young Farmers Federation"

Continued on page 23

TIME CHART

July	—1967—	Alberta Trip
July	—1967—	Macdonald College Seminar
Dec.	—1967—	St. Hilaire Workshop
Mar.	—1968—	Port Lewis Workshop
Aug.	—1968—	Spooner Pond Camp
Oct.	—1968—	Eastern Townships Federation
Nov.	—1968—	Annual Meeting Lachute
March	—1969—	St. Hilaire-Projects
July	—1969—	Lake St. Francis Camp

Macdonald Reports

international fertilized ova transfer successful birth of piglets ends suspense

BOTH Ted Sutherland, Swine Herdsman, and Bob Baker, Reproductive Physiologist at Macdonald College, were pleased as punch when the gilt they were attending delivered her fourth and final piglet last May 8th. For several days, both men were hard put to hide their anxious anticipation of the litter's arrival. They were positive the healthy piglet was the last because 115 days previously, the gilt had received only four fertilized ova. Going back to that bitter mid-January day, many visitors had gathered in the operating room of Macdonald's Large Animal Teaching and Research Building to observe Dr. Phil J. Dziuk transfer the fertilized ova. On his flight, he had carried a special styrofoam box holding a jar with plastic tubing containing the fertilized ova in culture medium.

In the fall of 1968, Dr. Baker had invited his former research director, Dr. Dziuk, to come to Macdonald and deliver a seminar on the various aspects of reproductive physiology involved in ova transfers. The two had agreed to attempt to do an international ova transfer at the same time. The key first step was to make sure by the use of drugs that both the donor female at the University of Illi-

nois and the recipient female at Macdonald College, Ste-Anne de Bellevue, P.Q., were in exactly the same appropriate stage of their reproductive cycles the day of the trip. In order to avoid rejection, it was already known that there is only a maximum of 24-hour difference in cycles possible. The donor female had been artificially inseminated with fresh undiluted semen 36 hours before Phil Dziuk planned to recover fertilized ova at the 2 to 4 cell stage.

At 5:00 A.M., Monday January 14th, after surgically preparing the donor, Dr. Dziuk recovered fertilized eggs by flushing them out of the upper uteri horns into fine plastic tubing using a tissue culture media. The temperature of the culture jar was maintained in the styrofoam box by additional bottles of warm water. Ten hours later and 900 miles away, Dr. Dziuk after surgically preparing the recipient female introduced fertilized ova into the left uterine horn. The recipient was kept under close quarantine for 30 days after the transfer.

This simple technique of transporting fertilized ova opens up the possibility of importing exotic pedigreed livestock without the usual exceedingly

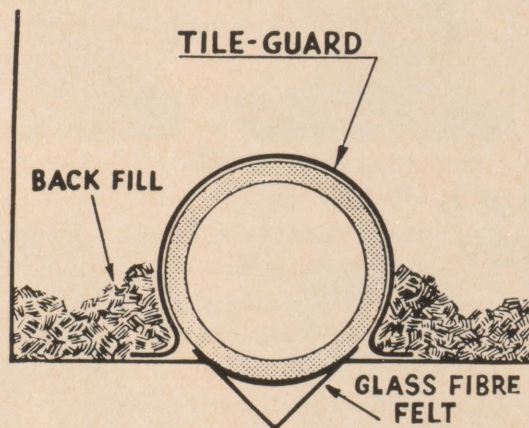
high costs involved in transporting and holding domestic livestock in quarantine. Dr. Baker also points out an additional immediate advantage which is that the young reared by a foster dam have a degree of passive immunity to some of the infectious organisms of their new surroundings.

That future research holds much in store is illustrated by the accomplishments of this recent experiment. Each measure of progress in technique brings the livestock industry nearer the day when such transfers will be done without surgery and in much the same way as artificial insemination is now. Imagine ordering pre-sexed ova of a particular beef breed to be transferred to the lowest producing cows of a dairy herd. Imagine ordering pre-sexed ova from pigs in an area of the world from which live animal importation is forbidden due to local disease problems. Dr. Baker is optimistic that if the present research momentum is maintained, these will be realities within 20 years. In the meantime, the livestock producer can work toward that day by making sure that he follows proper methods of identifying and evaluating genetically superior seed stock.

NOW... Prevent FARM DRAINAGE TILE CLOGGING

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agriculture diploma graduates

BUDIN, Gyorgy
Ste-Anne de Bellevue, Que.

DERICK, Kenneth
Pointe Claire, Que.

GROUNDREY, Wayne Garnet
Huntingdon, Que.

MCCARTHY, John Frederick
LaSalle, Que.

NESS, Andrew Mitchell
Howick, Que.

O'REILLEY, Muriel Adrienne
Min. of Agriculture & Colonization
Animal Science Prize
Rigaud, Que.

SKILLEN, Bruce Davidson
South Durham, Que.

STITT, Barry Foster
Fort Coulonge, Que.

LYNCH, Ned F.
Min. of Agriculture & Colonization
Horticulture Prize
Sherbrooke, Que.

McKinley, Gary Henry
La Ferme Farm Management Project
Prize
Quebec, Que.

PAGE, Gregory Thomas
Ville Jacques-Cartier, Que.

WALLACE, Ronald Brune
Farnham, Que.

WILSON, Stanford Allan
Franklin Centre, Que.

B. Sc. (Agr.) graduates 1969

ADAMS, Robert Gordon
Sydney, N.S.

ADSETT, John Francis
Moncton, N.B.

ALLISON, Mary Elaine
Morrisburg, Ont.

ARCHIBALD, Alfred
Berbice, Guyana

ARENBURG, David Murray
Truro, N.S.

BENEDETTI, Luigi
Napierville, Que.

BLASE, Nicolaas Arnoldus
Guelph, Ont.

BOGERT, Sheryl Anne
Pointe Claire

BOVELL, Donna Lorraine
Manzanilla, Trinidad, W.I.

BOYLE, Wayne Kenneth
Lachine

BRENNAN, George Michael
Ile Bizard

BUCKINGHAM, Robert Alfred
Pointe Claire

BURROUGHS, Richard John
Farnham, Que.

BUTLER, William James
Richmond, Que.

CASSON, David Montague
Como, Que.

CLARKE, Cameron Ray
Dorval

CODE, Gerald Oliver
Dorion, Que.

COLE, Wayne Douglas
Toronto, Ont.

COMEAU, Gerald Joseph
Meteghan, N.S.

COX, Robert Mackenzie
Truro, N.S.

DAVIDSON, Alan Scott
Rupert, Que.

DAVIS, Richard Bruce
Napanee, Ont.

DELBRIDGE, Richard William
Truro, N.S.

DUNSMORE, Carol Elizabeth
Swanton, Vt.

EDWARDS, Sullivan Wilson
King's Bay, Tobago, W.I.

ELLIS, John Michael
Dunham, Que.

ELLISTON, Isaac Joseph
Clarendon, Jamaica W.I.

FERN, Raymond Keith
Rohm and Haas Prize
Napanee, Ont.

FISK, Sydney David
Abbotsford, Que.

FLETCHER, Arthur David
Armdale, N.S.

FREEMAN, Robert Whitman
Pleasant River, N.S.

GARINO, Henry Joseph
Ottawa, Ont.

GAUDREAU, Jean-Marc
Verdun

GOULET, Henri
Jacques Cartier, Que.

GRIMM, Paul Hayward
Berwick, N.S.

GUNN, Donald Lester
Scotburn, N.S.

HARCOURT, Robert Murdoch
Ottawa, Ont.

HILL, Arthur Fulton
Truro, N.S.

HUGHES, Brian Morley
Beaconsfield

HUMPHREY, Stuart Ernest
Valois

IKIN, Glenn John
Montreal

JAMIESON, Duncan Manning
Montreal

JENSEN, Paul
Perth, N.B.

KABUGA, Joseph Dabien
Naro, Upper Region, Ghana

KAZEM, Mahmoud Darougheh
Teheran, Iran

KEDDY, Keith Michael
Steinberg Prize
Kingston, N.S.

KEDDY, Steward Randolph
Kingston, N.S.

KEIZER, Elliott Ralph
Centreville, N.S.

KIRTON, Noel Winston
Robert Raynauld Prize
Kingston,
St. Vincent, W.I.

LADIPO, Josephus Kehinde
University Scholar
Yaba Lagos, Nigeria

LAREAU, Michel
Farnham, Que

LEFEBVRE, Jacques Luc Joseph
Dorval

MacDONALD, Angus Alexander
Mabou, N.S.

MacDONALD, Ruth Marilyn
Truro, N.S.

MacKAY, Gary Wallace
Upper Stewiacke, N.S.

MacKEIGAN, Neil Gordon
Marion Bridge, N.S.

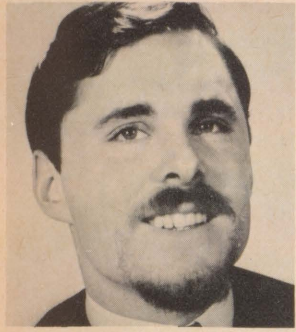
MacKENZIE, John Alexander
Conklin Trophy
Winnipeg, Man.

(Continued on page 14)

MACDONALD JOURNAL — JULY 1969

graduates with prizes

diploma in agriculture



LYNCH, Ned F.
Horticulture
Department of Agric. & Col-
onization Horticulture Prize



McKINLEY, Gary H.
Horticulture
La Ferme Farm Management
Project Prize



O'REILLEY, Muriel
Adrienne
Animal Sc.
Department of Agric. & Col-
onization Animal Science
Prize

school of food science



CHUNG, Shirley Sau-Lan
Food Management
University Scholar



MARSHALL, Susan Glenise
Dietetics
Governor General's Medal

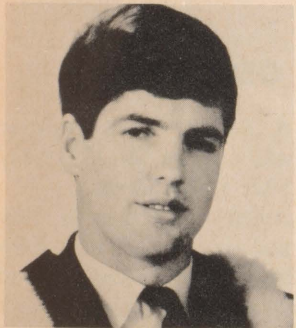


ROBINSON, Amanda Jane
Dietetics
Garland Prize

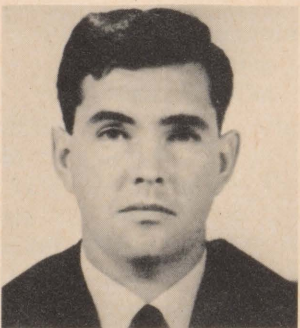


STOKES, Carol Beatrice
Teaching
Art of Teaching Prize

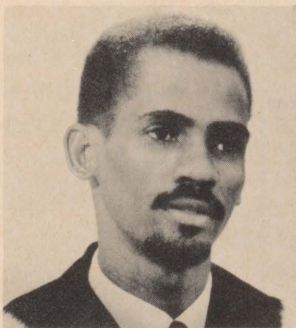
agriculture



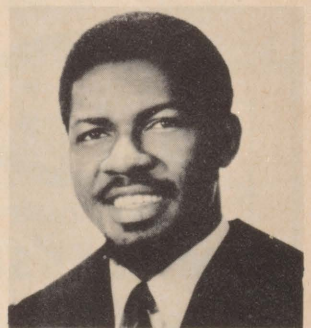
FERN, Raymond Keith
Plant Pathology
Rohm & Haas Prize



KEDDY, Keith Michael
Horticulture
Steinberg Prize



KIRTON, Noel Winston
Agronomy
Robert Raynauld Prize



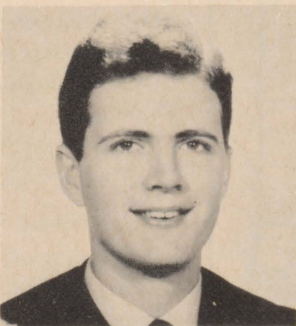
LAPIRO, Josephus Kehinde
Food Management
University Scholar



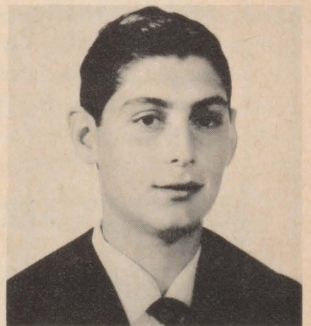
MACKENZIE, John Alex-
ander
Agricultural Chemistry
Conklin Trophy



RADLEY, Alton Ray
Animal Science
Steinberg Prize
Stern Cup
University Scholar



ROE, Christopher
Agricultural Chemistry
Governor General's Medal

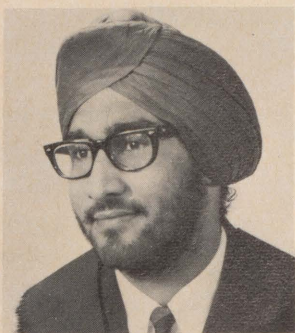


SHIMI, Porviz
Agronomy
Robert Raynauld Prize

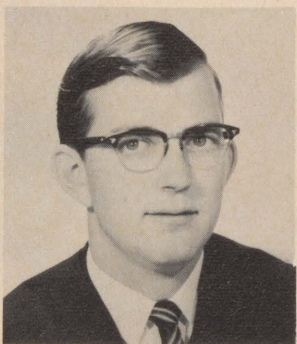
(please turn page)

Graduates with prizes *(Continued)*

Agriculture



SINGH, Sarjeet
Entomology
Lochhead Memorial Prize



WARNOCK, William Borden
Agronomy
Robert Raynauld Prize



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provides palatability, improved rumen activity, conditioning and tonic effects. Feeding pure cane molasses builds nutrition.

18

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MOLASSES
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B. Sc. (Agr.) graduates 1969 *(continued)*

MacLEOD, Victor Wallace
Northam, P.E.I.

MacMINN, David Hamilton
Bathurst, N.B.

McCLELLAND, Hubert Sifton
Cantley, Que.

McDONALD, John Gordon
Westmount

MILLETTE, Jean-Francois
Ste.Anne de Bellevue

MILLS, Bruce Alexander
Moncton, N.B.

MURRAY, John Philip
Flatlands, N.B.

NEIL, Lawrence Jack
Montreal

NEWSON, James Freeman
Weston, Ont.

O'CONNOR, Marlyn Joseph
Montcerf, Que.

OGIGA, Inko Raymond
Kugbo-Degema, Nigeria

PHILLIPS, Peter Alan
Dorval

RADLEY, Alton Ray
Steinberg Prize
Stern Cup
University Scholar
Hemmingford, Que.

REEVEY, Cynthia Mary
East Riverside, N.B.

REH, Peter George
Montreal

RILEY, Kenneth Walker
Baie D'Urfé

ROBINSON, John Lyn
Beaconsfield

ROE, Christopher
Governor General's Medal
University Scholar
Montreal

SCHERPHUIS Henk
Middelburg, Netherlands

SCOTT, Fraser Wallace
Dorval

SEARLE, John Stephen
Truro, N.S.

SHIMI, Parviz
Robert Raynauld Prize
Tajrish, Teheran, Iran

SINGH, Sarjeet
Lochhead Memorial Prize
University Scholar
Ipoh, Perak, Malaysia

SLATER, David Milne
Lakeside, Ont

SMITH, Harry Arthur
Moncton, N.B.

SPARROW, Robert Boyle
Kinburn, Ont.

TAYLOR, Stuart Burgess
Beaconsfield

TREVOR-DEUTSCH, Burleigh
Montreal

van BINSBERGEN, Albertus Frederick
Hilversum, The Netherlands

van den MUYZENBERG, Erwin
Waldemar
Berkel, The Netherlands

van der Wel, Pleun
Wateringer, The Netherlands

WARNOCK, Willard Borden
Robert Raynauld Prize
Cutler Shield
Grand Falls, N.B.

WHITEHEAD, Kim Konrad
Knowlton, Que.

WILLIAMSON, Ralph Donald
Trenton, N.S.

OBITUARY

GERALD A. ROCKWELL, Registrar of Macdonald College, died Tuesday May 20th, after a brief illness.

Mr. Rockwell was born in New Brunswick and received his B.A. from the University of New Brunswick and his Master of Education from Bishop's University. He began his teaching career in his native province and moved to Sherbrooke in 1941.

He joined the provincial education department of Quebec in 1957 and became successively inspector of secondary schools, secretary of the province's Central Board of Examiners, and associate chief of teacher certification.

He was appointed registrar of Macdonald in 1967.

Mr. Rockwell was awarded the Order of Scholastic Merit in 1968. He was a member of the Canadian College of Teachers and the Quebec Association of Protestant School Administrators.

THE FAMILY FARM

PUBLISHED IN THE INTERESTS OF THE FARMERS OF THE PROVINCE BY
THE QUEBEC DEPARTMENT OF AGRICULTURE AND COLONIZATION

Compiled by
Tom Pickup
Information Service,
Quebec Department of
Agriculture and Colonization

Photographs by
Office du Film du Québec



Dairy cattle belonging to Paul Jacob of St-Pierre-les Becquets grazing on the level farmlands of Nicolet County.

agricultural region 4

Office addresses, telephone numbers and territories of the Department of Agriculture and Colonization's personnel.

Counties: Arthabaska, Drummond, Nicolet, Yamaska

Regional Office: 370 St-Jean Baptiste, Box 1090, Nicolet Telephone: 293-4535

Coordinator: Donat Grégoire, agronome

Administration: Raymond St-Pierre

Technical personnel:

Farm management: Henri Verville, agronome

Farm credit:

Veterinary medicine: Jean Lessard, d.v.m.

Agricultural economics: Jacques Brosier, agronome

Extension: P.-E. Desjardins, agronome

Field crops: J.-René Paradis, agronome

Horticulture:

Livestock: J.-Marc Baillargeon, agronome

Poultry: Bernard Chagnon, agronome

Agricultural Engineering: J.-Marc Dionnel agronome

Domestic science: Pierrette Béland, Hélène Chrétien

Young Farmers: Hector Rivard, agronome

Crop insurance: J.-B. Sirois, P.-E. Lorti, agronomes

Other personnel: Roland Bilodeau, inspector

Secretaries: Madeleine Côté, Jocelyne Gauthier

Office head: Roméo Boisvert

LOCAL OFFICES

ARTHABASKA

Office: Provincial Building, 62 St-Jean-Baptiste, Victoriaville 758-1511

In charge:

Territory

Hector Béliveau, agronome

J.-Irénee Chabot, agronome

St-Valère, St-Rosaire, St-Louis, Daveluyville, Ste-Anne, Maddington, Princeville, Victoriaville, St-Christophe, Arthabaska, Ste-Victoire, St-Norbert, Chénier, St-Albert, Ste-Clothilde, St-Jacques Horton, Ste-Elisabeth, Ste-Séraphine, Warwick, Tingwick, Trois-Lacs, Chester East, West, and North, St-Rémi

Other personnel:

Roland Garant, agronome, Farm credit
Alex Ricard, Raynald Savaria, vétérinaires
Louis Laramée, inspector of dairy products
Réal Massé, Albert Levasseur, Roger Boisvert, Food inspectors
Euclide Caron, in-

spector Yvonne Dubé, secretary

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Office: 355 Marchand, Drummondville
478-1461

In charge

Territory

Pierre Goudreault, agronome
Durham, L'Avenir, Lefebvre, St-
Nicéphore, Ulverton, St-Edmond de
Grantham, St-Eugène, St-Germain,
Wickham, Grantham, St-Majorique,
Wendover

P.-E. Desjardins, agronome

Kingsey, Kingsey Falls, Notre-
Dame-du-Bon-Conseil, St-Lucien

Other personnel:

Gérard Fortier, agronome, Farm
credit Marcel A. Frenette, veteri-
nary Adolphe Beauchemin, inspector
of Dairy products Réal Hamel, Food
inspector Gérard Blanchard, Maple
products inspector (Wickham) Via-
teur Deschesne, inspector Lise
Chainey, secretary Ginette Turcotte,
secretary, crop insurance

NICOLET WEST

Office: 257 Mgr Courchesne, Box
1090, Nicolet 293-4521

In charge

Territory

Marc-Aurèle Gaudreault, agronome
Précieux-Sang, Ste-Brigitte, St-
Célestin,

Lauréat Lepage, technician

St-Léonard, Ste-Monique, Ste-
Perpétue

J.-René Paradis, agronome

Aston, Nicolet, Ste-Eulalie, St-
Grégoire,

Normand McHugh, technician

St-Samuel, St-Wenceslas

Other personnel:

Pierre Simpson, Lucien Robert,
insp. (Food) André Gagnon, agro-
nome, Farm credit Jean-Guy Brous-
seau, veterinary Jacques Viens, veteri-
nary Lorenzo Trottier, L.-Auguste
Beaubien, inspectors (Dairy prod-
ucts) (St-Wenceslas) Nicole Gauthier,
secretary

NICOLET EAST

Office: Box 69 Gentilly, 298-2028

In charge

Territory

Louis Baribeau, agronome

Bécancour, Gentilly, Ste-Angèle, St-
Sylvestre, Ste-Gertrude

Laval Giroux, agronome

Ste-Marie, Lemieux, Manseau, Ste-
Sophie, St-Pierre, Ste-Cécile

Autre personnel:

Horace Baron, inspector (Ste-Marie

de Blandford) François Deshaies, in-
spector Claude Guay, Jacques Bou-
let, inspectors (Food) Madame
Thérèse G. Baribeau, secretary.

YAMASKA

Office: 480 Notre-Dame, St-François
du Lac 68, Pierreville, Yamaska
county 568-2122

In charge

Territory

Clément P. Lemire, agronome

Yamaska, St-David, St-Pie de
Guire, St-Bonaventure, St-Guillaume
d'Upton, St-Marcel

Robert Elie, agronome

La Baie du Febvre, St-Zéphirin, La
Visitation, St-Elphège, Notre-Dame
du Pierreville, Pierreville, St-
François du Lac, St-Gérard, St-Joa-
chim

Other personnel:

Benjamin Faucher, Simon Biron, ve-
terinarians Roméo Asselin, inspector-
Thérèse Maurault, secretary

the farm of Edward Price, buckingham west

AFTER WORKING for 32 years in a
factory near Buckingham, Mr. Edward
Price decided quite recently to devote
all his time to the farm he bought in
1943. He has already taken part in a
five-year farm improvement competi-
tion ending last year.

Of the 175 acres of land lying on
both sides of the highway, 75 are
wooded, 25 are in natural pasture, and
75 are arable. Mr Price taps a few
hundred maple trees to obtain syrup
and sugar for domestic consumption.
He plans to increase his sugaring
operation to 1,000 buckets.

The soil of the 75 arable acres is
varied: there are 25 acres of clay soil,
16 of loam, 28 of sandy land, and 6 of
black muck soil. Some of the low-ly-
ing land would be better for being
drained if there were an outlet for the
excess water. Besides farming his own
fields, Mr. Price has the use of some
pieces of land in return for certain
fees. The crops in 1968 comprise 12
acres of Champlain barley, 30 of Rod-
ney oats (away from the farm), 4 of
Pride corn, and quarter of an acre of
Green Mountain potatoes. The rest of

the land is in hayfields seeded to red
clover, alsike clover and alfalfa, or in
pasture.

The crops are mainly used to feed
an Ayshire herd consisting of 16 cows,
a bull, and 7 heifers or heifer cows.
The herd is not on test. Even though
the milk is sold at a low price to a
processing plant at Plaisance, it is
hard to understand the disparity be-
tween the 9,000-pound average yield of
the cows for 1967, as given in the
entry form for the contest, and the
gross receipts of only \$3,150 for dairy
products. In spite of the presence of
the bull on the farm, artificial inse-
mination is used in most cases. The
livestock also includes a mare and her
foal and two other work-horses, and
50 cockerels which will help to stock
the house-hold freezer.

The farm is adequately equipped
with machinery including two tractors,
a pick-up baler, a corn binder and a
threshing machine.

The farmhouse is separated from
the other buildings by the entrance
road and is backed by a wooded hill;
the surrounding lawns, trees, flowers,
and pretty kitchen garden make a very
attractive park-like setting. The barn
was built six years ago. The milk is
kept in a small modern 1,720 pound
cooling tank.

Mrs. Price has succeeded in making
her large house into a really comfort-
able home. A lot of skill goes into her
home handicrafts.

Mr. and Mrs. Price have four sons,
two of whom, aged 16 and 17, are still
at home and attending school.

(From the *Agricultural Merit Contest*
report for 1968)

successfull auctions of beef cattle at Sherbrooke and Shawville

ANIMALS OF good quality brought
very satisfactory prices at beef-cattle
auctions held at Shawville in Pontiac
county on April 14th and at Sher-
brooke on April 19th under the aus-
pices of the Quebec beef cattle
breeders' association.

Prices for the sixty head of beef cat-
tle auctioned ranged from \$350 to
\$600. Most of the animals were
bought by Quebec farmers but some

MACDONALD JOURNAL — JULY 1969

were bought by the provincial and federal departments of agriculture.

At Shawville, the Quebec Department of Agriculture and Colonization bought the two best bulls from a lot of 20 Herefords at \$585 and \$530. They will be used for the benefit of farmers in Gatineau county under a policy designed to help farmers in less favoured regions.

At Sherbrooke about 40 head of Hereford, Aberdeen Angus and Short-horn bulls and cows were offered. The best bull, a Hereford, was bought by the Canada Department of Agriculture for \$600, and the second best — also a Hereford — was bought by the Quebec Department of Agriculture and Colonization.

For the first time at an auction, seven of the animals offered for sale had been performance-tested at the St-Hyacinthe station. All of them fetched good prices.

A spokesman said that the quality of the animals auctioned this year was better than in previous years.

more virus-free elite strawberry and raspberry plants produced at deschambault

THE EXPERIMENTAL station at Deschambault reports that its 1968 production of virus-free Elite strawberry and raspberry plants was very encouraging, namely 16,325 strawberry plants (five varieties) and 36,500 raspberry cuttings (eight varieties).

The above yield was obtained from parent plants derived from stocks grown on the central experimental farm at Ottawa under extremely carefully controlled conditions.

The multiplication programme has been in progress at Deschambault for about ten years and is similar in principle to the seed potato propagation project being carried out at Baie St-Ludger, Manicouagan.

The Elite plants produced are sent to selected growers for use as foundation stocks to produce "Certified" plants for distribution to commercial growers.

The ultimate object of this work is the production of high-quality strawberries and raspberries in Quebec

while reducing the risk of virus diseases in plantations.

The Deschambault station is attached to the Research and Education branch of the Department of Agriculture and Colonization.



Holsteins on the farm of Mr. Marcel Veilleux at Ste-Rose, Dorchester.

\$28,770 grant to provincial holstein breeders's association

SPEAKING IN MAY to members of the Saguenay-Lake St. John Holstein Club and their guests, Mr. Clement Vincent, Minister of Agriculture and Colonization revealed that his department has paid a grant of \$28,770 to the provincial Holstein breeders' association. This annual grant was made under the department's policy to aid purebred dairy cattle breeders' societies. Mr. Vincent said that the policy had been put into effect because the department realized the need for associations of elite breeders using the latest methods.

Because breed associations are not profit-seeking enterprises and cannot

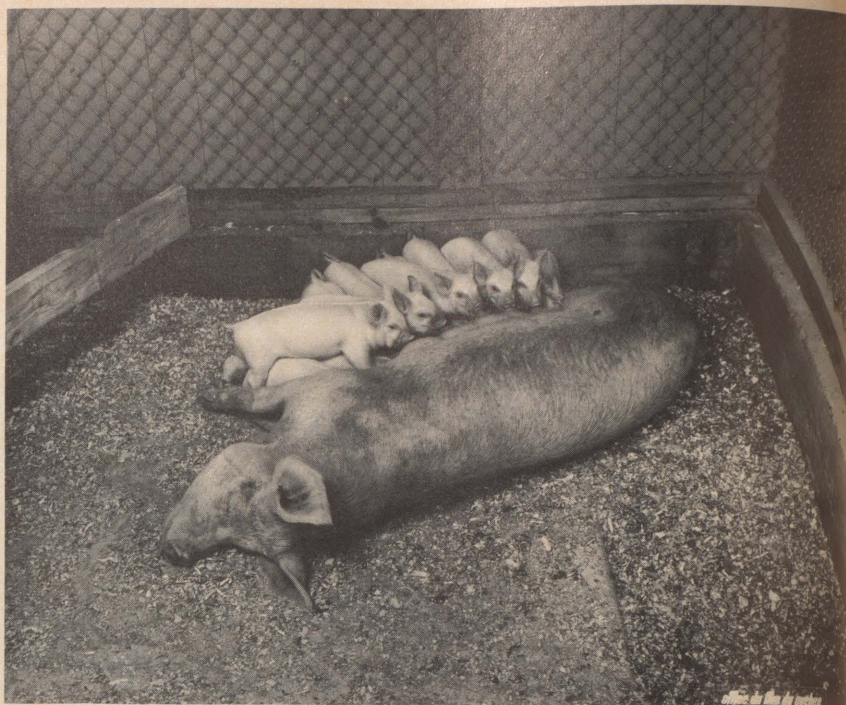
be sure of obtaining the funds they need to run their organization and provide breeders with needed services, the agricultural department pays an annual grant of \$10,000 to any breeders' association with at least 100 regular members which employs a full-time secretary-fieldman.

A society with at least 500 regular members and two full-time employees, namely a secretary-fieldman and a fieldman, is entitled to an additional grant of \$8,000.

If an association has 1,000 members or more and three employees, it is eligible for a further grant of \$5,000 as well as the two already mentioned.

In addition, under this policy, every association is allowed an annual grant of \$10 a year per member who carries out ROP testing.

In order to qualify for these benefits, an association must meet certain requirements including submission of an annual financial report.



Feeding time for a vigorous litter of piglets owned by Mr. Lucien Gasse at Ste-Flavie, Matane, with the sow's two-storey cafeteria operating at full capacity.

aid for the purchase of purebred swine

*Artificial Insemination
and Livestock Improvement
Division.*

Assistance Policy.

*Production and
Development Branch.*

IN VIEW OF the need for Quebec farmers to improve their breeds and lines of pigs and of the difficulties faced by breeders in maintaining a sound improvement programme, the Department offers purchase premiums based on results obtained in ROP tests and the official classification of purebred swine.

REGULATIONS

A. The buyer:

1. must be a farmer and submit his application on the form accompanying this circular, together with the registration certificate, to the livestock specialist of the regional agricultural office within the three months following the date of purchase;
2. is not entitled to a purchase premium for a boar or sow on which such a premium has already been paid.

B. Breeding swine must:

1. have scored a weight-fat probe index of 100 or over, calculated as shown in the following examples;
2. have been classified in accordance with the regulations for classification of purebred swine;
3. be registered in the herdbook of their breed and transferred to the buyer's name;
4. have come from a herd whose state of health has been found acceptable by an appointed veterinarian;
5. have satisfied all requirements of the swine ROP programme;
6. not exceed a maximum adjusted back-fat measurement of 1.20 inches nor an adjusted 200 lb. age of 180 days, even if their weight-probe index is over 100.

AID FOR THE PURCHASE OF HYBRID SOWS

It is recognized that cross-matings

Example Required	Sex	Adjusted back-fat	Age 200 lb.	Weight-probe index
Figures for pig "A"	Male	1.00"	165 days	100
	Male	0.90"	155 days (i.e. + 10)	120
Required average Figures for pig "B"	Female	1.05"	170 days	100
	Female	0.85"	175 days (i.e. + 20)	115
			(i.e. — 5)	

PREMIUMS

Weight-probe index

100-110

111-125

126 and over

Boars

\$25.00

\$40.00

\$55.00

Sows

\$20.00

\$35.00

\$50.00

between certain breeds are beneficial from the standpoint of feed conversion and birth-weight. The Department offers purchase premiums for hybrid sows resulting from recommended cross-matings between parents of known genetic background.

REGULATIONS

1. Sows must be of known genetic background, i.e. begotten by parents, registered in the herdbook of their respective breed, whose back-fat has been probed;

2. Sows must be from a recommended cross-mating;

3. Sows must be identified by tat-

tooning;

4. Hybrid sows must satisfy the same ROP requirements as purebred sows.

N.B. The "Aid for the purchase of purebred swine" policy has been discontinued for all pigs born after February 1st. 1969.

This policy supersedes the previous one and will remain in force until further notice.

The Deputy Minister of Agriculture and Colonization,

Romeo Lalonde.

PREMIUMS

Weight-probe index

100-110

111-125

126 and over

Hybrid sows

\$10.00

\$20.00

\$25.00

N.B. The "Aid for the purchase of purebred swine" policy has been discontinued for all pigs born after February 1st. 1969.

low yields in Quebec's syrup

A SHORTER season than usual, a late flow of sap, and coldish windy weather are the causes of what seem to have been generally low yields in Quebec's maple tapping regions this year, in the opinion of Mr. Jean Guilbeault, head of the Department of Agriculture and Colonization's Honey and Maple products section. Mr. Guilbeault's opinion is based on early reports on yields from most of the sugar bushes in Quebec.

These preliminary reports show big differences in yield between the various regions. Mr. Guilbeault expects that the province's total maple

syrup production this season will fall considerably short of two million gallons.

In Beauce — which is still the province's chief maple producing area — and in the Lower St-Lawrence and Laurentian regions, the yield was considerably below normal; but in the area south of Montreal, in Shefford county and around Granby yields were average to good although less than last year's exceptional production.

In most of the principal regions, last year's yields were excellent, totalling 32 million pounds. They were generally good in 1967, amounting to 30 million pounds, and exceptional in 1966 at over 38 million pounds. The total yield has not been as low as this season's since 1965, when it was about 2,046,000 gallons — slightly higher than is now expected for 1969

blueberry research resumed at lake st. john

WORK ON A blueberry research programme was resumed on May 1st at the St-Léon de Labrecque experimental station a few miles north-east of Alma.

Dr Victorin Lavoie, ecologist in the faculty of Agriculture at Laval university, who is in charge of the research, said that it is designed to develop systematic growing and planned commercial production of blueberries — hitherto a somewhat casual occupation.

The research programme, started two years ago under a federal-provincial ARDA agreement, is being conducted in close collaboration with the Research and Education branch of the Quebec Department of Agriculture and Colonization. At present it involves some twenty experiments being carried out by about fifteen specialists.

So far the research has dealt mainly with use of pollinating agents, fertilizer application, harvesting, various methods of coping with the drawbacks of periodic burning, and control of competing vegetation.

In addition to continuation of this research, the programme prepared on the Department's recommendation with the help of economists and sociologists at Laval, will also deal with social and economic aspects of the research.

Women's Institutes



Charter members in attendance at the 50th anniversary celebrations were front row, Mrs. Leonard Boyd, Mrs. Gordon Smith, Mrs. Gordon Walker and Mrs. T.E. Kettyle.

Standing are Mrs. Bert McGibbon, branch secretary; Miss Hanna Smith, County president; Mrs. Ethel McGibbon, Provincial president, and Mrs. Douglas Smith, Branch president: —Photo, Syd Drew

W.I. branch marks 50th milestone

A gala occasion for the Jerusalem - Bethany Women's Institute took place last Thursday in the Brownsburg School cafeteria, when the branch celebrated its 50th anniversary with a fitting banquet.

With the president, Mrs. Douglas Smith, in the chair, those specially honored on this occasion were four charter members present, Mrs. Leonard Boyd, Mrs. T.E. Kettyle, Mrs. Gordon Smith and Mrs. Gordon Walker, also one in absentia, Miss Ethel Walker. A toast was proposed to these charter members by Mrs. N. MacGeorge (a member for 32 years) and on their behalf Mrs. Gordon Smith suitably replied, recalling how she had first attended the W.I. as a young girl accompanying her mother, Mrs. John Boyd, who later became County president.

Besides the branch president and charter members, those present at the head-table were Mrs. Ethel McGibbon, Provincial president, Miss Hanna Smith, County president, and the branch secretary, Mrs. Bert McGib-

bon. Decorations were in the Golden Anniversary motif, with yellow candles and flowers, and a three-tiered cake centering the table of honor. During the proceedings the beautiful cake, made by Mrs. T.E. Kettyle and Mrs. D. Smith, was ceremoniously cut by Mrs. Gordon Walker and Mrs. Leonard Boyd, charter members of the branch. To each of the original members, the president handed a memento of the occasion, a gold maple leaf pin.

There were around 40 ladies present to enjoy this celebration and the turkey supper provided by members of the Brownsburg branch, whose president, Mrs. Mervin Cowley, voiced congratulations and good wishes.

NCWI seminar

"We are making progress on plans for the seminar to be held for the Northern Canada Women's Institutes, July 21-31, 1969, at Akaitcho Hall, Yellowknife", announces Mrs. J. Philip

the month with the W.I.

Matheson, Chairman of the NCWI Committee for the Federated Women's Institutes of Canada. This seminar is under the joint auspices of the Associated Country Women of the World and the FWIC, and is being arranged by Mrs. Matheson, who is also ACWW Area Vice-President for Canada.

Two delegates will be attending from each of the 13 Women's Institutes presently operating in the Northwest Territories and the Yukon. A similar number of participants from each of the other settlements where interest is being shown in the W.I. will be permitted to attend. The program is being developed under the various headings covered by the over-all theme, "Conservation and Development of Human and Natural Resources". An attendance of around fifty is anticipated. This includes administrative staff and resource personnel brought in to assist in the discussions.

A display of native craft will be arranged in connection with the seminar. This will show the work of the NCWI members and demonstrations will be given by them on specific types of crafts related to the various areas, such as moosehair embroidery, beadwork, carving and fur inlay. All aspects of home and community living will be discussed, including recreation and safety, the latter of particular concern to NCWI members.

Mrs. George Clarke, FWIC President, will be attending the seminar and assisting in the program. She will preside at the "Birthday Party" to be held the last evening, which will commemorate the 50th birthday of the national organization. The Federation was formed in 1919 by the coming together of Provincial Units.

"There will be an opportunity for everyone to participate in the program throughout", says Mrs. Matheson, "and it won't all be hard work, we will have fun games interspersed along the way. This getting together", she adds, "of our NCWI members is of value as we continue to advance the program of the Women's Institute in the Territories".

Two extension workers for the FWIC will be in the field prior to the seminar to assist in its preparation. These are Mrs. L.T. Vear in the Mackenzie District, and Mrs. M.E. Lambert in the Yukon.

ARGENTEUIL: Arundel heard Dr. Lyons from the Laurentian Regional School speak on Adult Education. **Brownsburg** entertained Lakefield Branch and organized a tour of Steinberg's Bakery in Montreal. **Frontier** raised extra funds by auctioning off slips, bulbs and various articles at the close of their meeting. **Jerusalem-Bethany** will celebrate their 50th Anniversary on May 15th with a banquet. **Lachute** branch sent a letter of protest to the Mayor and Councillors concerning the noise and untidy conditions of their streets. **Pioneer** heard an exchange student from South Africa give a commentary on slides and views of his country. **Upper Lachute East End** filled Ditty Bags.

BONAVENTURE: Cascapedia branch meeting was in charge of the Agriculture Convenor with roll call on vegetables and a paper on the same subject. A successful card party has been held as a fund raising project.

Marcil: Roll call was "Name a Health Rule" and the Convenor of Health and Welfare gave an excellent paper on Cancer, followed by a question and answer period on that subject. **New Richmond West:** Our new branch organized in March. Roll call was "pay a penny an inch for your waist measurement". They heard articles on Welfare and Health and on Education by their Convenors and started collecting their Pennies for Friendship. **Restigouche** heard articles by each of their Convenors and had an apron exchange. They held a successful card party and brought in articles for the Ditty Bags.

BROME: Austin heard a paper on "Flowering Fruit Trees" and heard their Library Report, showing generous donations from two other organizations. 50 French children's books had been purchased and added to the Library. They made plans for filling Ditty Bags and chose delegates for County and Provincial Conventions. A roll call on "old superstitions" was enjoyed. **Knowlton's Landing** heard a letter of thanks from Waterloo Hospital for a donation in memory of a former member. Articles made for J.P. Coats Contest were displayed and articles brought in for Ditty Bags. **South Bol-**

ton's motto for the month was "if you tickle the earth with a hoe she laughs with a harvest." Their roll call was answered with gifts for the Ditty Bags. The Agriculture Convenor was in charge of the programme and slips, seeds, and plants were sold. Sick members were remembered and a paper was read on the danger of aluminum foil coming in direct contact with exposed heating elements.

CHATEAUGUAY-HUNTINGDON: Ormstown heard the report of the County meeting held at Hemmingford.

COMPTON: Brookbury: The roll call here was answered with "useful hints for home gardeners". The Agriculture Convenor read a paper on Pesticides. They also held an exchange of bulbs, slips and plants. They gave a donation to Maplemount Home and money for school prizes in public speaking. **Canterbury** entertained members from the Belvidere Branch. They packed 10 Ditty Bags and had an exchange of slips and plants. They also gave donations to Maplemount Home and for school prizes and brought in aprons for the sale table. **East Angus** members modeled their "favourite apron" as their roll call. Convenors contributed articles on Our Town, Grounds for Divorce, The first woman appointed as Judge, and a report on a Regional School meeting held in Sherbrooke. **East Clifton:** Flowers were sent to patients in hospital and the need for pads and used cotton was reported. A Penny Auction was held in aid of their Sunshine work. Six Ditty Bags were packed. One article of clothing was brought in by each member for the Save The Children's Fund, Toronto. An article on "How to plant for early production" was read and tours of the new Regional School were conducted. **Scotstown** held a sale of plants and had a quiz on flowers. Members collected for Red Cross and gave a donation to Maplemount Home.

GATINEAU: Aylmer East: The programme was in charge of the Agriculture Convenor and a contest was held on "indoor vegetable gardens" - e.g. carrot tops, Kale beet tops, making an attractive assortment of greenery. Papers were read on Meatless Meats, A Diet of Man Made Meats, and a poem entitled The Aim of the Women. **Kazabazua** held a very successful Bake Sale. **Rupert** heard a talk

by their President on facts you should know about Earn Money Schemes (Shady Sales) and advised the members to contact the Better Business Bureau when in doubt. They also honoured an 80-year old Charter Member who was present, by sharing a Birthday Cake. The Agriculture Convenor will order trees, plants and shrubs for the Cemetery. One member collected \$74.00 for the Red Cross. A Pot Luck Supper was arranged and work done on the Institute Hall.

Eardly: Mrs. Kennedy read an article on Why we blink our eyes. This branch has a new member and are sponsoring two girls in the Miles for Millions. **Wright:** Roll call was "a valuable hint I have learned in cooking or sewing". The Home Economics Convenor gave a talk on How to Choose your Clothes to Fit Your Figure. An interesting contest was held on Old Time Farm Equipment. Ditty Bags were filled for save the Children Fund.

MEGANTIC: Kinnear's Mills welcomed one visitor and had an exchange of plants and bulbs. New programmes were made out for the year and will be typed ready for the next meeting. Final plans were made for catering. **Inverness** members held a hat making contest. Hats were to be made of flowers, vegetables, paper or anything available. The winner was Mrs. Allan Little. Plans were made for the County Meeting and the catering at a wedding reception. A member was appointed to buy the material for making Ditty Bags.

MISSISQUOI: Cowansville: For the roll call each member named a province or territory of Canada, and described its floral emblem. A member showed a beautifully illustrated book of these flowers. Another member gave a talk on the history, civilization and influence of the Arabs.

Dunham: A Montreal High School teacher spoke about the teachers' problems with the Government. Articles were read on The Bleak Outlook for Agriculture in the next Decade, and New Party Wear. Donations were made to the Red Cross and to the Student's Loan Fund. Membership in the C.A.C. was renewed. A card, signed by all members, was sent to a lady celebrating her 100th birthday. **Fordyce:** Mr. Sutherland, Guidance Director of the new Regional High School for the District of Bedford

spoke and showed slides of the new school building in Cowansville. 150 pine trees were purchased to be planted around the W.I. Picnic Ground. Slips, plants and bulbs were exchanged. **Stanbridge East:** For the roll call, each member made and wore a vegetable corsage; these were judged and Mrs. Deschamps was the winner. A Spelling Match was held of words referring to agriculture, horticulture and gardening. The winner of this contest was Mrs. Trembley.

ROUVILLE: Abbotsford had a very pleasant meeting with a Buffet Style luncheon. Mrs. Ossington was the guest speaker, bringing news and added zest to the meeting. One member had entries in all three sections of the J.P. Coats contest. New members were welcomed here too. One young member had typed copies of the programme for all of the others.

SHEFFORD: Granby Hill answered the roll call with contributions for the Ditty Bags. They plan on filling 24. They made plans for continuing the care of their roadside Picnic Area. Finished articles for the Coats Contest were displayed. **Granby West** had a discussion on ways of helping Canadian Indians. Their roll call was "name a requirement necessary to become a Canadian citizen". Ditty bags were made and filled.

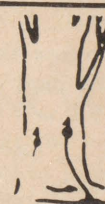
Waterloo-Warden: Roll call was "a green thumb hint". Articles on The Joy of Driving in the Country, and A Mother's Day letter from a Daughter were read. A sale of plants, bulbs and seeds was held with prizes for the two largest sales. \$6.33 was realized. A new member was welcomed at this meeting.

SHERBROOKE: Ascot made and distributed 10 Ditty Bags for filling. A luncheon was served by Ways and Means Committee. **Brompton Road** entertained the Brookbury Branch and held a Pirate Bingo game for entertainment. A member played Old Favourite piano selections and another member acted as auctioneer at a Home Baking Sale. A very successful card party is reported. **Lennoxville** has a novel way of collecting their Pennies for Friendship with a Secret Birthday Box. They held a Pot Luck Supper for members and their families and friends with door prizes for added fun. A display of handicrafts by members was

also held. **Milby** had an amusing time by answering the roll call with a joke. They remembered a young bride with a gift, sent a sunshine basket to a shut-in and a hamper of canned goods to a bereaved family.

STANSTEAD: Ayer's Cliff saw slides of a trip across Canada and also of the Botanical Gardens by Miss Davidson. They are sponsoring a child for two-week visit to a summer camp. \$108 worth of daffodils were sold for the Cancer Society. They also held a Guest Day meeting with each member bringing a guest. Two new members joined. **Beebe:** Roll call was "name a tree and the use for its wood". The Agriculture Convenor was in charge of the programme and gave a reading on The Next Twelve Months". She also conducted a contest on Flowers and presented each member with a plant slip and gave a beautiful African violet to be sold. Money was voted to the Cafeteria at the Elementary School. **Hatley** had as their roll call "name and comment on one of the new products being produced to replace standard items such as Milk and Grain". Members were appointed to take charge of the campaigns for the Red Cross and the Blind. Each member donated money to purchase items for the Ditty Bags. A committee was formed and plans made for a W.I. Float for the Dominion Day Parade. **Hatley Centre** sponsored an animal clinic for the giving of injections to dogs and cats in the Rabies Area. A member celebrating her 50th Anniversary was remembered with a gift. This branch reports a very successful Rummage Sale.

VAUDREUIL: Harwood: The programme was in charge of the Citizenship Convenor. Members answered a "Know Canada Better" quiz. Some interesting items relating to Immigration were also presented. Eleven members visited St. Anne's Hospital for Veterans, taking along gifts. The visit was greatly enjoyed by patients and visitors.



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Quebec young farmers

(Continued)

was almost a reality. Thanks to the initiative of this group it is now a reality.

The aim of the annual meeting which was attended by 45 people was to plan a program for 1969. This meeting was held at Lachute in conjunction with the annual banquet and dance held by the Lachute 4-H Club. The program was discussed in detail, however at the business meeting it was decided that Q.Y.F. should become official and a constitution should be prepared. This constitution is now ready for final consideration at the next annual meeting.

Up to this point frequent discussions had taken place concerning the shortage of projects for local clubs. The members were concerned that all too often the clubs were calf clubs only. They wanted more projects. In March 1969, another small group met at St. Hilaire. This time the task was to prepare 3 project outlines. After a busy week end and then considerable work by Teresa Mellish 3 projects are now available. These projects are (1) Farm Accounting and Farm Management, (2) Tractor, and (3) Car and Highway Safety.

A one week camp is planned to take place during the last week of July. It is expected that 30 young farmers will attend. Clayton Murphy of Huntingdon has been working on a camp program since last January.

They received support;

Mr. Gaston Allard of the Quebec Department of Agriculture & Colonization has helped this group on many of their programs and has been involved in planning several others. His encouragement has been very much appreciated. The Quebec Farmers Association have contributed money to the Group. Mrs. Teresa Mellish secretary manager of the Q.F.A. has acted as secretary but has been much more than just a secretary. She has been very involved in all the programs. Many others have helped, some organizations and other individuals have

helped at different stages and all have gained personally because of having worked with this dynamic group.

The Future?

Who knows? I predict that this group will continue to emphasize the importance of the individual. They will stress leadership development. They will continue to sponsor camps workshops, and special projects. Their members will slowly grow. Their contribution to a better community will be felt in many areas in Quebec and outside the province. Already members

of this group have left the province to work with rural people. One is a nurse, another a teacher, others are young farmers now owning their own businesses. The leadership skills they developed in this group will be useful wherever they go. The Quebec Young Farmers have made a contribution to Quebec. They will do much more. This association is still young as yet the constitution is unofficial. They are fine examples of what youth can do if they are willing to help themselves. I have been fortunate to work with this group. They reinforce my faith in young people.

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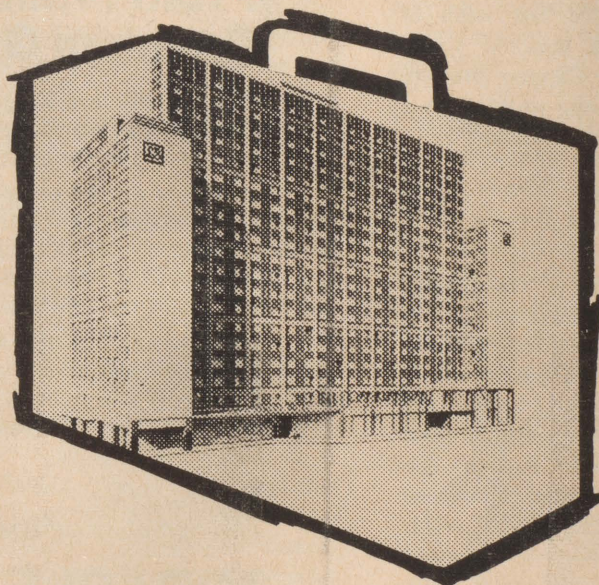
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